CLEAN AIR ACT SECTION 112(r) INSPECTION

PRASA, Isabela Wastewater Treatment Plant

Isabela, Puerto Rico

GENERAL INFORMATION

Stationary Source	PRASA, Isabela Wastewater Treatment Plant
Date of Inspection	December 5, 2007
USEPA Inspectors	Ellen Banner, USEPA – Region II (Edison, NJ) Doel Miranda – RST 2, USEPA – Region II
Contract Auditor	Neil Mulvey, Sullivan Group (Subcontractor)
Description of Activities	• Opening meeting with facility representatives. • Program audit. • Closing meeting with facility representatives. Program audit consisted of the following activities: 1. Document review. 2. Field verification. 3. Personnel interviews.

STATIONARY SOURCE INFORMATION

EPA Facility ID #	1000-0012-3038
Date of Latest	Postmark Date: 1/14/08

Submission :	Anniversary Date: 1/14/13
Facility Location	Villa Pespuera Isabela, PR 00662 Tel. (787) 756-2717
Number of Employees	9

Description of Surrounding Area	The facility is located along the north coast just east of Isabela. Residences and small businesses are located to the north of the facility. Open space surrounds the facility in other directions. There are no businesses or residences immediately adjacent to the property lines.
Participants	Participants included: Ellen Banner, USEPA – Region II, Edison, NJ Doel Miranda, USEPA Contractor – RST2 Neil Mulvey, USEPA Contractor – Sullivan Group E. Escobar, Environmental Scientist, PRASA – Compliance Agustin C. Cruz, General Plant Supervisor, PRASA – Compliance Maria I. Crespo Lorenzo, Environmental Supervisor, PRASA – Compliance Carlos E. Berrios, Manager, PRASA – Compliance* Gino Giovannetti, Operations Supervisor, PRASA – Compliance Pefro V. Vorgas, Maintenance Supervisor, PRASA - Compliance *Lead participant for the facility.

REGISTRATION INFORMATION

Process ID #	42841
Program Level (as reported in RMP)	Program 3
Process Chemicals	Registered with chlorine @ 12,000-lbs.
NAICS Code	22132 (Sewage Treatment Facilities)

GENERAL COMMENTS

The Isabela Wastewater Treatment Plant is one of many water and wastewater facilities owned by the Puerto Rico Aqueduct and Sewer Authority (PRASA). The plant is located along the north coast, just east of Isabela. The facility primarily receives domestic waste and operates as a conventional secondary treatment system treating approximately 2 MGD of wastewater. There are nine employees. The wastewater treatment plant serves a population of 16,600.

The facility handles chlorine in 1-ton cylinders. The chlorination process includes an open air chlorine cylinder storage and feed room and a separate enclosed chlorination room. Two chlorine cylinders are connected at a time, one feeding and one stand-by. The system automatically switches from the feed cylinder to the stand-by cylinder based on operating pressure. The facility uses approximately 35 - 45-lbs. of chlorine per day, or about one 1-ton cylinder a month. Maximum available storage is six 1-ton cylinders, including on-line/stand-by cylinders. At the

time of this inspection there were three full 1-ton cylinders in storage, one cylinder on-line, and one cylinder on stand-by.

Each connected chlorine cylinder has a separate feed line to the automatic switchover unit. The chlorination room includes the switchover unit and two flow meters. Downstream of the flow meters chlorine gas exits the chlorination room and feeds two injectors.

The process includes two chlorine detectors, one detector at the cylinder connection point and one detector located in the chlorination room. The chlorine detectors provide an audible and visual alarm at 4.0 PPM. There is no interlock between the chlorine detector in the chlorination room and the ventilation fan.

RMP DOCUMENTATION

Some RMP programs were documented in a RMP/PSM Manual, dated August 23, 1999. This manual, however, was prepared for the plant's former owner, Compania De Aguas.

The facility manager was not present on the day of the inspection. The PRASA representative at the inspection indicated that they expected to receive updated RMP documentation from PRASA Corporate in the near future. There was therefore minimal RMP documentation available on site for review during the inspection.

Management System [*40 CFR 68.15*]

There was no written description of an RMP management system on site.

Process Safety Information (PSI) [*40 CFR 68.65*]

PSI documents available for review included:

- Chlorine Block Flow Diagram; 7/14/99
- Simplified Piping & Instrument Diagram (P&ID); 7/14/99

A field check of the P&ID against the as-built system identified:

- Incorrect P&ID: shows pressure reducing regulators in each chlorine feed line that are not present in the field.
- Pressure gauges in the chlorine feed lines that were inoperative.

Process Hazard Analysis (PHA) [*40 CFR 68.67*]

The initial process hazard analysis was completed on 7/1/99. There was no record of the required five-year PHA revalidation.

Standard Operating Procedures (SOPs) [*40 CFR 68.69*]

The facility produced the following written operating procedures:

- Procedure No. 805 – Emergency Procedures; 3/8/02
- Procedure No. 149 – Chlorine Container Handling; 1/22/01

The Chlorine Container Handling procedure requires the use of a monthly checklist for system integrity. There was no record of completed checklists. The facility also has a monthly checklist to ensure integrity of SCBAs which was not being completed.

There was no documentation of annual review and certification of the SOPs.

Training [*40 CFR 68.71*]

Operator training records included:

- 8/23/05 – record of 8-hour chlorine management and emergency response training for one employee
- 4/21/06 – record of chlorine safety training for two operators
- August 2007 – record of a FIT test for a new employee

Training records were incomplete and did not reflect an organized approach to initial and refresher operator training.

Mechanical Integrity [*40 CFR 68.73*]

There is no list of covered equipment included in the mechanical integrity program.
There were no records available of scheduled inspections and tests of covered equipment.
There were no calibration records available for review for the two chlorine detectors.

Management of Change (MOC) [*40 CFR 68.75*] & Pre-Startup Review (PSR) [*40 CFR 68.77*]

There was no written Management of Change or Pre-Startup Review procedure available for review.

Compliance Audits [*40 CFR 68.79*]

There were no completed RMP compliance audit reports available for review.

Incident Investigation [*40 CFR 68.81*]

There was no written Incident Investigation procedure available for review.

Employee Participation [*40 CFR 68.83*]

There was no written Employee Participation program available for review.

Hot Work Permit [*40 CFR 68.85*]

There was no written Hot Work Permit procedure available for review.

Contractor Safety [*40 CFR 68.87*]

There was no written Contractor Safety program available for review. Facility management reported however that outside contractors are not hired to work on or near the chlorine process.

Emergency Response [*40 CFR 68.90 – 68.95*]

There was no Emergency Response Plan available for review.

FACILITY TOUR

Several items noted during the facility tour include:

- The two chlorine detectors were new, installed on 12/3/07. The new detectors are Severn Trent Model No. 1610.

- The inspection team conducted an adhoc test of the two chlorine detectors to determine if the alarms were functional. The detector near the chlorine cylinders functioned properly, however the detector in the chlorination room failed to function. It was noted that the audible alarm could be heard in the immediate area of the chlorination building, but not at the main office building where operating personnel would likely be located.

- Chlorine Institute B kits were readily available for emergency response.

Post-Inspection Discussions

After the inspection described above, EPA met with PRASA management and their contractors to discuss the on-going efforts to bring multiple facilities, including the Isabela Wastewater Treatment Plant, into full compliance with the requirement of RMP. In the presentation made by PRASA, it was clear that, for example, the mechanical integrity program for many facilities would be completed by the end of December 2007. Other RMP elements also had set dates established for completion. It was agreed at that time, that compliance efforts which were on-going at the time of the inspection, would be monitored to completion and enforcement actions would be deferred until that time.

Status reports provided by Ms. Priscilla Garcia indicate that the following RMP were elements were completed:

- Management system
- Corrected P&IDs available since June 10, 2008
- Process Hazard Analysis (PHA) – completed December 12, 2007
- Monthly checklist for chlorine containers and Self-Contained Breathing Apparatus (SCBAs)
- Training
- Mechanical Integrity
- Management of Change (MOC) and Pre-Start-Up Review

- Accident Investigation
- Hot Work
- Contractor Safety
- Emergency Response Plan

The findings listed below concern the RMP elements that remain to be addressed.

FINDINGS

The facility should certify annually that the operating procedures for the chlorine process are accurate and current and that they have been reviewed as often as necessary, *as required by 40 CFR Part 68.69(c).*

The facility should conduct an internal audit to evaluate the plant's compliance with the provisions of the RMP's prevention program every three years to verify that the developed procedures and practices are adequate and are being followed, *as required by 40 CFR Part 68.79(a).*

A copy of EPA's RMP audit guidance is attached.